


# EXHIBIT H

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		825.350	7202 2211
APPLICANTS: J. J. KILLER, SAN ANTONIO, TX; STEVEN SPRINGMEYER, BELLEVUE, WA; W. F. FOX, ENGLEWOOD, CO.			
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FILING FEE RECEIVED \$360.00		ATTORNEY'S DOCKET NO. A94122US	
ADDRESS: J. J. KILLER J. J. KILLER & KRIEGER 1117 WEST LOOP SOUTH 11TH FLOOR ARLINGTON, TX 76010-9095			
ISSUE FEE IN FILE			
TITLE: SLIP-AND-CONTROL SYSTEM FOR LOCAL AREA NETWORKS			
U.S. DEPT. of COMM.-Pat. & TM Office-PTO-436L (rev. 10-78)			
PARTS OF APPLICATION FILED SEPARATELY			
NOTICE OF ALLOWANCE MAILED 4/4/96		CLAIMS ALLOWED Total Claims 19 Print Claim	
ISSUE FEE Amount Due 1250 Date Paid 7-8-96		DRAWING Sheets Drawn 19 Figs. Drawn 14 Print Fig. 5	
Label Area		BRIAN ZIMMERMAN PATENT EXAMINER GROUP 2200 Primary Examiner	
PREPARED FOR ISSUE		ISSUE BATCH NUMBER V66	
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Form PTO-436A  
(Rev. 8/92)

(FACE)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicants: \$  
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HELLER, ET AL. \$  
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Serial No.: 08/283,832 \$ Group Art Unit: 2211  
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Filed: 08/01/94 \$ Examiner: M. HORABIR  
\$  
For: SENSORY AND CONTROL SYSTEM \$  
FOR LOCAL AREA NETWORKS \$ Attorney Docket No.: A94122US

RESPONSE AND AMENDMENT

Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Dear Sir:

In response to Office Action mailed September 11, 1995, please  
amend the application as follows:

In the Claims:

Please add claim 19 as follows:

--19. (New) The object location and tracking system of  
claim 1, wherein the interface circuitry further includes  
components for coupling said plurality of sensors to said computer  
network, and further includes means for providing to said computer  
network object identifier variables in the variable-based protocol  
corresponding to status of and control of the components.--

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REMARKS

In an Office Action mailed September 11, 1995, all of the claims were rejected under Section 102 or 103 as allegedly being anticipated or obvious over a U.S. patent to Conrad, et al., in view of a U.S. patent to White or a U.S. patent to Zijlstra. These rejections are respectfully traversed.

Brief Description of the Disclosed Embodiment

Before turning to the substantive rejections, Applicants deem a brief review of the disclosed embodiment to be in order. Applicants have disclosed an object tracking and location system that uses infrared transmitters and infrared sensors to locate objects. The system also includes physical receptors for identification, and provides control for physical switches.

This is implemented, however, using a computer network in which the tracked transmitters are assigned object identifiers using a variable-based protocol. An object identifier is a software data construct that has historically been associated with a part of a computer network. The SNMP protocol, for example, uses a fetch-store paradigm in which each server on a network maintains a set of conceptual variables that includes simple statistics, such as a count of packets received, as well as complex variables that correspond to TCP/IP data structures, such as cache and routing tables. But using network based object identifiers, the object

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identifiers have typically corresponded to something in the network itself. That is, the use of object identifiers to correspond with physical objects separate and apart from the network is believed to be new. According to the invention, each transmitter whose transmission is received by a sensor is assigned an object identifier in the network even though it is not technically a part of the network itself.

Further, the protocol of object identifiers associated with the transmitters is the same protocol as that used to control the external physical event switches and to indicate the status of the physical receptors. In this way, the same protocol used to represent a tag transmitter at a particular location is used to represent an external switch that is activated in response to that tag. For example, assume a person enters a room wearing a tag. That tag transmits its identification signal, which is received by a sensor. That transmitter is assigned an object identifier by the network, and its presence is detected by an SNMP client. Further assume that a door should be unlocked in response to that person's presence in the room. Using the same object identifier based protocol with which it received the transmitter presence information, the SNMP client then triggers the external switch, unlocking the door.

This object identifier protocol lends to a streamlined interface between the network software and the tag transmitters,

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the external controls, and other location system hardware. The people and objects with tags basically become associated with object identifiers within the network.

The same protocol is even used for the physical elements of the network that process the information sent by the tag transmitters. These elements include, for example, a concentrator and a collector. When it is desired to alter the software within such a concentrator or collector, or to get the status of such a device, those devices are similarly accessed via object identifiers--the same protocol that is used to access the tags as well as the external controllers.

Finally, according to the disclosed embodiment, not merely tags, but also physical receptors for uniquely coded "keys" are provided. Using these physical receptors, one's physical action of contacting the receptor can be made necessary to unlock a door, rather than simply detecting that person's presence at a location. This facilitates added security and control at entrances and exits, for example.

#### The Rejections over Conrad

##### Claims 1, 13, 14, and 18

Claims 1, 13, 14, and 18 were rejected under Section 102 or Section 103 over Conrad, et al. Conrad shows an object location

system connected to an ethernet network. But it was stated concerning Conrad that:

Although Conrad, et al., fails to specifically refer to using a variable based protocol that implements object identifier variables, such a limitation is inherent or at least an obvious choice in design in order to provide information about the tracked transmitters to and from the computer.

(Office Action ¶5.) Applicants respectfully must disagree with this assessment of the network of Conrad.

First, to be "inherent," a limitation must necessarily follow from the implementation according to the reference. A number of techniques, however, could be used to communicate over a network as in Conrad. Conrad's use of a network does not prescribe using any particular one of those techniques for communicating data over that network. Therefore, the use of object identifier variables is not inherent within the Conrad reference, because that is not the only way to transfer data using Conrad.

But further, it is not an "obvious design choice" to use these object identifiers. As discussed above, Applicants are unaware of object identifiers having been used to represent physical objects separate from a network. Yet that is done according to the invention--an object identifier is made to represent a tag that is physically separated from the network. Because Conrad does not teach or suggest using object identifiers to represent the transmissions of these tags, Applicants submit that it would not be

a matter of "obvious design choice," especially because a number of different techniques could be used.

The use of object identifiers has a number of advantages. It provides a software data construct representative of the physically separate tags, where that software data construct can be accessed in the same manner as though one were accessing another device on the network. Thus, these physically separate devices are effectively made a conceptual part of the network.

For all of these reasons, Applicants submit the rejections of claims 1, 13, 14, and 18 should be withdrawn. To summarize, object identifiers are not inherent in Conrad, and the rejection based on "obvious design choice" ignores the advantages of Applicants' invention.

Referring further to the rejection of claim 18 at paragraph 6, Applicants further submit that nothing in Conrad suggests to use the same protocol of object identifiers for controlling the external physical events as the protocol for tracking tag transmitters. This provides the advantage of an identical, object-oriented paradigm for both of these distinct physical activities. Applicants submit that while doing so is a good idea, with attendant advantages, being a good idea does not render something obvious. (If being a good idea rendered something obvious, the more advantageous the invention, the more "obvious" it would be.) Using the same protocol to control external events as is used to



define the existence and location of tags has a number of advantages--ease of programming, uniformity of the software interface, etc. But to achieve these advantages in an object location and tracking system by using the same protocol for controlling external events and for detecting object location is nowhere taught or suggested. For these additional reasons, Applicants submit the rejections of claim 18 should be withdrawn.

Claims 2-4, 8-12, 15, and 16

Claims 2-4, 8-12, 15, and 16 were further rejected under Section 103 as allegedly being obvious. It was stated that the use of SNMP would be a matter of obvious design choice. Applicants reiterate their arguments above with regard to claims 2, 3, and 15. Further, however, Applicants note that claims 8-12 are directed to activating control circuitry responsive to tag transmissions, where the control circuitry is activated using the same object identifier variable protocol as is used to detect the presence of tags. As discussed above, using the same protocol is not taught or suggested by itself, and is especially non-obvious given that while the control circuitry is a physical part of the network, the actual tags are not. Yet, both are represented using the same data structure. The remaining claims are allowable as depending from allowable claims. Withdrawal of the rejections is respectfully requested.

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Claims 5-7 and 17

Turning to the rejections of claims 5-7 and 17, these claims are further directed to using a physical receptor in addition to the infrared sensor. Applicants submit that using both of these together is not obvious, because the sensor of Conrad and the receptor of Zijlstra both would accomplish the task of detecting the presence of a person. It was stated that it would have been obvious to provide receptor circuitry of Zijlstra because Zijlstra teaches one form of identifying a device is to provide receptor circuitry. But, Applicants submit this actually teaches away from the combination. If one implemented Conrad, one would have detected the location of individuals and objects using the sensor. There would be no need to include physical receptors for identifying a device with a unique code. They are two different means of detecting objects, but there is no suggestion to use them in the same system. There are a number of advantages that result from using them in the same system, such as a highly controlled access protocol can be achieved by using the physical receptor, whereas a less controlled but more convenient access protocol can be achieved using the tags. For these reasons, withdrawal of these rejections is further requested.

Claim 19

Finally, Applicants have added new dependent claim 19 which further recites that the interface circuitry that provides the

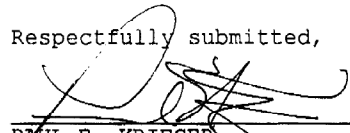
object identifiers itself includes its own object identifiers for status and control of that interface circuitry. Applicants submit that using the same object identifier protocol to control the interface circuitry as is used to provide the location of tags is nowhere taught or suggested by the references.

#### Conclusion

Applicants submit for the foregoing reasons that the claims are allowable. Withdrawal of the rejections and allowance of the application is respectfully requested. If there are any questions or comments, the Examiner is invited to contact David R. Clonts at (713) 850-0909.

Date: 1/11/96

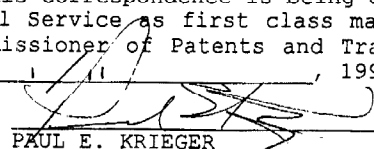
Respectfully submitted,

  
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#### CERTIFICATE UNDER 37 C.F.R. § 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on 1/11, 1996.

  
PAUL E. KRIEGER  
Registration No. 25,886



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
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DATE MAILED:

# NOTICE OF ALLOWABILITY

## PART I

- ☒ This communication is responsive to Amendment Filed 1/16/96.
- ☒ All the claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice Of Allowance And Issue Fee Due or other appropriate communication will be sent in due course.
- ☒ The allowed claims are 1-19.
- ☐ The drawings filed on \_\_\_\_\_ are acceptable.
- ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has [ ] been received. [ ] not been received. [ ] been filed in parent application Serial No. \_\_\_\_\_, filed on \_\_\_\_\_.
- ☐ Note the attached Examiner's Amendment.
- ☐ Note the attached Examiner Interview Summary Record, PTOL-413.
- ☐ Note the attached Examiner's Statement of Reasons for Allowance.
- ☐ Note the attached NOTICE OF REFERENCES CITED, PTO-892.
- ☐ Note the attached INFORMATION DISCLOSURE CITATION, PTO-1449.

## PART II

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" indicated on this form. Failure to timely comply will result in the ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- ☒ APPLICANT MUST MAKE THE DRAWING CHANGES INDICATED BELOW IN THE MANNER SET FORTH ON THE REVERSE SIDE OF THIS PAPER.
  - ☒ Drawing informalities are indicated on the NOTICE RE PATENT DRAWINGS, PTO-948, attached hereto or to Paper No. 4. CORRECTION IS REQUIRED.
  - ☐ The proposed drawing correction filed on \_\_\_\_\_ has been approved by the examiner. CORRECTION IS REQUIRED.
  - ☐ Approved drawing corrections are described by the examiner in the attached EXAMINER'S AMENDMENT. CORRECTION IS REQUIRED.
  - ☒ Formal drawings are now REQUIRED.

Any response to this letter should include in the upper right hand corner, the following information from the NOTICE OF ALLOWANCE AND ISSUE FEE DUE: ISSUE BATCH NUMBER, DATE OF THE NOTICE OF ALLOWANCE, AND SERIAL NUMBER.

### Attachments:

- Examiner's Amendment
- Examiner Interview Summary Record, PTOL-413
- Reasons for Allowance
- Notice of References Cited PTO-892
- Information Disclosure Citation, PTO-1449
- Notice of Informal Application, PTO-152
- Notice re Patent Drawings, PTO-948
- Listing of Bonded Draftsmen
- Other

BRIAN ZIMMERMAN  
PATENT EXAMINER  
GROUP 2200

*[Signature]*